

Application No. 10/070,052  
Docket No. 3041-21  
Reply to Office Action of July 28, 2004

This listing of claims is the same as the prior listing of claims in this application except that all the pending claims are identified as "previously presented".

Listing of Claims:

Claims 1-24 (canceled)

25. (previously presented) A disinfecting mist consisting essentially of gaseous chlorine dioxide and an inert gas selected from the group consisting of carbon dioxide, helium and nitrogen.

26. (previously presented) The mist of Claim 25, wherein the amount of gaseous chlorine dioxide is about 0.0001 to less than 10% by volume, wherein the amount of the inert gas is about 90% to about 99.9% by volume, and wherein the water vapor is about 1 to about 20% by volume.

Claims 27-34 (canceled)

35. (previously amended) An electrolytic process for preparing a chlorine dioxide mist, which process comprises the steps of:

- (a) feeding a buffered aqueous alkali metal chlorite solution into the anolyte compartment of an electrolytic generator;
- (b) feeding water into the catholyte compartment of the electrolytic generator;
- (c) supplying a motive inert gas to an eductor to create a vacuum in the anolyte compartment; and

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(d) and recovering the mist, which consists essentially of gaseous chlorine dioxide, the inert gas, and water, from the anolyte compartment.

36. (previously amended) The process of Claim 35, further comprising the step of supplying a motive inert gas to an eductor to create a vacuum in the catholyte compartment.

37. (previously presented) The process of Claim 35, further comprising the step of demisting the recovered chlorine dioxide mist.

38. (previously presented) The process of Claim 35, further comprising the steps of introducing the chlorine dioxide mist near the top side of a demister tank, collecting the condensed water in the demister tank, sparging the collected water with an inert gas introduced near the bottom side of the demister tank, discharging the sparged water from the bottom of the demister tank, and recovering a mixture of chlorine dioxide gas, inert gas, and residual water vapor from the top other side of the demister tank.

39. (previously presented) The process of Claim 35, wherein the inert gas in the mist is selected from the group consisting of air, oxygen, carbon dioxide, helium, and nitrogen.

40. (previously presented) The process of Claim 35, wherein the amount of gaseous chlorine dioxide is about 0.0001 to less than 10% by volume, wherein the amount of the inert gas is about 90% to about 99.9% by volume, and wherein the water vapor is about 1 to about 20% by volume.

41. (previously presented) The process of Claim 40, wherein the inert gas is air.

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42. (previously presented) The process of Claim 35, wherein the alkali metal chlorite is sodium chlorite.

43. (previously presented) The process of Claim 42, wherein the buffer is sodium carbonate/sodium bicarbonate or sodium diphosphate/sodium hydrogen phosphate.

44. (previously presented) The process of Claim 35, further comprising the step of disinfecting crops with the recovered mist.

45. (previously presented) The process of Claim 44, wherein the crops are fresh produce, grains, or tobacco.

46. (previously presented) The process of Claim 45, wherein the fresh produce is a vegetable or a fruit.

47. (previously presented) The process of Claim 35, further comprising the step of disinfecting clay with the recovered mist.

48. (previously presented) The process of Claim 35, further comprising the step of disinfecting fields, greenhouses, storage cellars, agricultural equipment, and ventilation equipment with the recovered mist.

49. (previously presented) The process of Claim 35, further comprising the step of disinfecting a porous surface with the recovered mist.

50. (previously presented) The process of Claim 49, wherein the porous surface is wood or concrete.